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PATENT ABSTRACTS OF JAPAN

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(51) Int. Cl.: C12N 15/09 A61K 38/35 C07K 14/436
C12P 21/02

(22) Application date: 29.09.93

(30) Priority:

(71) Applicant: ASAHI BREWERIES LTD
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NIKKA UISUKI KK(43) Date of application
publication: 11.04.95(72) Inventor: NISHIYAMA CHI HARU
YUKI TOSHIFUMI
OKUMURA YASUSHI
SHIBUYA ICHIRO(84) Designated
contracting states:

(74) Representative:

(54) MODIFIED ACARIAN
MAIN ALLERGEN AND ITS
PRODUCTION

(57) Abstract:

PURPOSE: To obtain the subject allergen useful as the therapeutic agent for allergic diseases caused by acarian allergen by employing a gene coding a modified Der-fil produced by substituting a specific amino acid residue of an acarian main allergen Der-fil with alanine.

1 Asp Glu Val Asp Val Lys Asp Cys Ile Asn Asn Glu Ile Lys Lys Val
1 GAT CAA GTC GAT GTT AAA GAT TGT GGC AAC GAT GAA ATC AAA AAA GTA

CONSTITUTION: A prokaryote or eucaryote is transformed with a replicated vector containing a gene coding a modified Der-fil, and subsequently cultured. A modified acarian main allergen is collected from the culture product. The modified acarian main allergen lowers the IgE antibody-binding activity, and inhibits wild type Der-fil binding to the IgE antibody. The modified Der-fil is produced by substituting alanine for one of the No.4, 6, 7, 10, 11, 12, and 127 amino acids of acarian main allergen Der-fil. A gene coding the acarian main allergen Der-fil has a DNA sequence of the formula, etc.

118 Asp Asn Gly Val Leu Ala Cys Ala Ile Ala Thr His Ala Lys Ile Arg
287 GAT AAT GGT GTC TTA GCT TGC GGT ATT GCT ACC CAC GGT AAA ATC GAT

129 Asp ***

385 GAT TAA

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PATENT ABSTRACTS OF JAPAN

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(71) Applicant: ASAHI BREWERIES LTD

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(74) Representative:

(54) MODIFIED MAJOR MITE
ALLERGEN AND ITS
PRODUCTION

(57) Abstract:

PURPOSE: To obtain a new allergen useful as a therapeutic agent for allergic diseases due to mite allergens.

CONSTITUTION: This modified allergen is obtained by substituting cysteine residue in a major mite allergen Der fII with serine residue according to the genetic engineering. The gene capable of coding the major mite allergen Der fII has a DNA sequence expressed by the formula, etc., and is obtained from a culture prepared by culturing a prokaryote or a eucaryote transformed with a replication vector containing a gene capable of coding the modified Der fII in which the cysteine residue in the major mite allergen Der fII is substituted with the serine residue.

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1 Asp Gln Val Asp Val Lys Asp Cys Ala Asn Asn Glu Ile Lys Lys Val
1 GAT CAA GTC GAT GTT AAA GAT TGT GCC AAC AAT CAA ATC AAA AAA GTA

17 Met Val Asp Gly Cys His Gly Ser Asp Pro Cys Ile Ile His Arg Gly
49 ATG GTC GAT GGT TGC CAT GGT TCT GAT CCA TGC ATC ATC CAT CGT GGT

38 Lys Pro Phe Thr Leu Glu Ala Leu Phe Asp Ala Asn Glu Asn Thr Lys
97 AAA CCA TTC ACT TTG GAA GCC TTA TTC GAT GCC AAC CAA AAC ACT AAA

49 Thr Ala Lys Ile Glu Ile Lys Ala Ser Leu Asp Gly Leu Glu Ile Asp
145 ACC GCT AAA ATT GAA ATC AAA GCC AGC CTC GAT GGT CTT GAA ATT GAT

65 Val Pro Gly Ile Asp Thr Asn Ala Cys His Phe Met Lys Cys Pro Leu
193 GTT CCC GGT ATC GAT ACC AAT GCT TGC CAT TTT ATC AAA TGT CCA TTG

81 Val Lys Gly Gln Gln Tyr Asp Ala Lys Tyr Thr Trp Asn Val Pro Lys
241 GTT AAA GGT CAA CAA TAT GAT GCC AAA TAT ACA TGG AAT GTG CCG AAA

97 Ile Ala Pro Lys Ser Glu Asn Val Val Val Thr Val Lys Leu Val Gly
289 ATT GCA CCA AAA TCT GAA AAC GTT GTC GTT ACA GTC AAA CTT GTT GGT

113 Asp Asn Gly Val Leu Ala Cys Ala Ile Ala Thr His Ala Lys Ile Arg
337 GAT AAT GGT GTT TTG GCT TGC GCT ATT GCT ACC CAC GCT AAA ATC CGT

129 Asp ***

385 GAT TAA